

Abstract

[0035] A stacked foil thrust bearing assembly provides a compact, lightweight, high load capacity, high temperature, oil-free foil thrust bearing for use in high speed rotating machinery. A stacked foil thrust bearing assembly comprises a plurality of thrust runners in adjacently spaced and parallel relationship. Each thrust runner includes an annular-shaped portion having generally opposite axial sides, and a thrust bearing positioned on each of the generally opposite axial sides. Each thrust bearing includes a thrust bearing plate and a spring plate operatively engaging the thrust bearing plate. A plurality of foils are circumaxially dispersed about one axial side of the thrust bearing plates. A plurality of springs are circumaxially dispersed about one axial side of the spring bearing plates.